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06/02/2004 12:20 PM

To: NCIC HPV@EPA

cc:

Subject: Fw: Environmental Defense comments on Benzene, Ethenyl-, Aryl-Bromo Derivatives (CAS# 125904-11-2)

----- Forwarded by Anh Nguyen/DC/USEPA/US on 06/02/2004 12:20 PM -----



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Subject: Environmental Defense comments on Benzene, Ethenyl-, Aryl-Bromo Derivatives (CAS# 125904-11-2)

(Submitted via Internet 6/2/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and RHENRICH@glcc.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Benzene, Ethenyl-, Aryl-Bromo Derivatives (CAS# 125904-11-2).

Great Lakes Chemical Corporation, in response to EPA's High Production Volume (HPV) Chemical Challenge, has submitted robust summaries and a test plan describing available data for benzene, ethenyl-, aryl-bromo derivatives and proposing testing to address unfilled data gaps.

On review of this submission we find that all of the data described address a single chemical, dibromostyrene, which is said by the sponsor to be the same as or simply another name for benzene, ethenyl-, aryl-bromo derivatives. However, dibromostyrene has a different chemical structure from the one shown for benzene, ethenyl-, aryl-bromo derivatives, and it also has a different CAS number. We base these statements on an examination of the entry for dibromostyrene available from the NIH website called ChemIDPlus, available at <http://chem.sis.nlm.nih.gov/chemidplus/>. This site shows a CAS number (31780-26-4) and structure for dibromostyrene that both differ from those provided by the sponsor for benzene, ethenyl-, aryl-bromo derivatives; the CAS number and name for benzene, ethenyl-, aryl-bromo derivatives on this website agree with those provided by the sponsor, although the site does not provide a chemical structure.

While it may be that benzene, ethenyl-, aryl-bromo derivatives is in fact derived from dibromostyrene, they clearly are not the same chemical. We are at a loss to understand this claim of equivalency by the sponsor. The data provided certainly do not address the sponsored chemical. Moreover, the chemical structures differ sufficiently that we do not consider CAS# 31780-26-4 to be a viable surrogate for CAS# 125904-11-2. In any case, the sponsor has not made a case for using dibromostyrene as a surrogate for the sponsored chemical.

Does the inclusion of the term "derivatives" refer somehow to the product(s) of a polymerization reaction involving dibromostyrene for use as a flame retardant(s)? If so, that is not made clear, and the chemistry involved would need to be provided, given the differences in chemical structures. It is not stated if more than one polymer is produced or if

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the resulting polymer(s) contains significant quantities of the monomer. It is also stated that "The primary use of this chemical is incorporation in engineering plastics as a flame retardant." Other uses are not mentioned and it is not indicated whether benzene, ethenyl-, aryl-bromo derivatives or dibromostyrene may be used as a monomer, or if it is always polymerized when used as a flame retardant.

A search of the literature found there is virtually no published information on either dibromostyrene or benzene, ethenyl-, aryl-bromo derivatives. Because the data provided by the sponsor are for dibromostyrene, we have reviewed this submission assuming that the information provided addresses, not the sponsored chemical, but rather dibromostyrene, CAS# 31780-26-4 ? which is NOT and HPV chemical.

Our review of the brief test plan indicates most of the required SIDS elements are addressed by one or two studies of dibromostyrene. The exceptions are the ecotoxicity endpoints. The test plan proposes studies to provide data on dibromostyrene toxicity to fish, aquatic invertebrates and algae that should be sufficient to address these data gaps.

The test plan briefly describes the available studies for other endpoints, and indicates dibromostyrene has low toxicity, is not mutagenic and poses minimal risk of reproductive and/or developmental toxicity. However, it would also be desirable if some description of production, transport and use might be provided so that the associated human and environmental risks of this chemical, and its polymeric product(s), might be better assessed.

The robust summaries provide additional detail regarding the respective studies. We would only comment that it is unfortunate that all of the data cited in the robust summaries are from internal company reports, and are thus unavailable to the public.

In summary, unless the sponsor can justify why the studies described for dibromostyrene are appropriate to address benzene, ethenyl-, aryl-bromo derivatives, we consider this an inadequate submission for the latter.

Thank you for this opportunity to comment.

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